

1 We claim:

2 1. A method of treating acne conditions, which comprises:

3 contacting an acne problem area of a patient, with a therapeutically effective amount  
4 of one or more antimicrobial metals in a crystalline form to provide a localized antimicrobial  
5 and anti-inflammatory effect.

6 2. The method as set forth in claim 1, wherein the one or more antimicrobial metals are  
7 characterized by sufficient atomic disorder, such that the metal, in contact with an alcohol or  
8 water-based electrolyte, releases atoms, ions, molecules, or clusters of at least one  
9 antimicrobial metal at a concentration sufficient to provide a localized antimicrobial and anti-  
10 inflammatory effect.

11 3. The method as set forth in claim 2, wherein the antimicrobial metal is nanocrystalline  
12 silver.

13 4. The method as set forth in claim 1, wherein the one or more antimicrobial metals are  
14 provided as a coating on, or filler in, a dressing, or in a pharmaceutical composition with one  
15 or more pharmaceutically and dermatologically acceptable carriers, diluents, or excipients  
16 suitable for topical application.

17 5. The method as set forth in claim 4, wherein the pharmaceutical composition includes a  
18 nanocrystalline powder of one or more antimicrobial metals, or a solution containing  
19 dissolved species from a nanocrystalline powder or coating of one or more antimicrobial  
20 metals.

21 6. The method as set forth in claim 5, wherein the pharmaceutical composition is a gel,  
22 cream or lotion containing the antimicrobial metal powder in an amount of 0.01 - 5 % by  
23 weight, or a liquid containing 0.001 - 1 % by weight of the antimicrobial metal.

24 7. The method as set forth in claim 4, wherein the coating is provided on a dressing.

25 8. The method as set forth in claim 7, wherein the coating is 150 - 3000 nm thick.

26 9. The method as set forth in claim 3, wherein the nanocrystalline silver is formed with  
27 sufficient atomic disorder such that, in contact with an alcohol or water based electrolyte, the  
28 silver releases ions, atoms, molecules or clusters of the silver on a sustainable basis.

29 10. The method as set forth in claim 7, wherein the nanocrystalline antimicrobial metal  
30 coating comprises:

31 a base layer of a partly reflective material capable of generating an interference colour  
32 when covered with a partly reflective, partly light transmissive top layer;

1 a top layer formed over said base layer, said top layer being a partly reflective, partly  
2 light transmissive thin film containing at least one antimicrobial metal and having a thickness  
3 such that a first or second order interference colour is produced, said top layer having a  
4 refractive index different from that of the base layer, and antimicrobial metal being formed  
5 with sufficient atomic disorder such that the top layer, in contact with an alcohol or water  
6 based electrolyte, releases ions, atoms, molecules or clusters of the antimicrobial metal into  
7 the alcohol or water based electrolyte on a sustainable basis.

8 11. The method as set forth in claim 10, wherein the dressing fixed in place with an  
9 occlusive or semi-occlusive layer which maintains the dressing in a moist condition.

10 12. The method as set forth in claim 11, wherein the occlusive or semi-occlusive layer is  
11 an adhesive tape or film.